

## ABSTRACT OF THE DISCLOSURE

A carrier including a magnetic core material and a layer located on a surface of the magnetic core material, wherein the carrier satisfies the following relationships (1) to (3):  $0.90 \leq (\sigma_a/\sigma_b) < 1.00$  (1);  $200 \leq (\sigma_b \cdot \rho_c) \leq 400$  (2);  $10 \leq (\sigma_b/\rho_c) \leq 20$  (3), wherein  $\sigma_b$  represents a magnetization of the carrier at 1,000 Oe,  $\sigma_a$  represents a magnetization of the carrier after frictionized with a cylindrical sleeve under a specific condition and  $\rho_c$  represents a true specific gravity of the carrier, wherein the carrier has a weight-average particle diameter of about 25 to about 65  $\mu\text{m}$  and includes carrier particles having a weight-average particle diameter not greater than about 12  $\mu\text{m}$  in an amount of not greater than about 0.3 % by weight, wherein a ratio between the weight-average particle diameter and a number-average particle diameter of the carrier is about 1 to about 1.3, and wherein an electric resistance is from about  $1.0 \times 10^9$  to about  $1.0 \times 10^{11} \Omega \cdot \text{cm}$  when an AC voltage represented by the following formula (4) is applied at a frequency of 1,000 Hz to a magnetic brush of the carrier is formed between parallel plate electrodes having a gap of  $d$  mm such that magnetic brush has a space occupancy of 40 %:  $E(\text{V}) = 250 \times d$  (4), wherein  $d$  is  $0.40 \pm 0.05$  mm and  $E$  is a peak voltage.

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